

WHAT IS CLAIMED IS:

1 1. A network service entity for a base station system,
2 comprising:

3 at least one point-to-point functional unit;
4 a signalling functional unit; and
5 a message distributor unit, said message distributor unit
6 coupled to said at least one point-to-point functional unit,
7 said signalling function unit, and a connection interface, said
8 message distributor unit operable to distribute packet
9 information to or from said connection interface.

10 2. The network service entity of Claim 1, further
11 comprising:

12 a point-to-multipoint functional entity coupled to said
13 message distributor unit.

14 3. The network service entity of Claim 1, wherein the
15 base station system comprises an IP-based base station system.

1 4. The network service entity of Claim 1, wherein said
2 signalling functional unit comprises a BVC signalling functional
3 unit.

4 5. The network service entity of Claim 1, wherein said
5 network service entity comprises a PCU.

6 6. The network service entity of Claim 1, wherein said
7 packet information comprises GPRS data.

8 7. The network service entity of Claim 1, wherein said
9 packet information comprises EDGE GPRS data.

10 8. The network service entity of Claim 1, wherein said
11 connection interface comprises a Gb interface.

1 9. The network service entity of Claim 1, wherein said
2 at least one point-to-point functional unit includes an RLC/MAC
3 control unit.

4 10. The network service entity of Claim 1, wherein said
5 at least one point-to-point functional unit is coupled to a
6 radio air interface.

7 11. The network service entity of Claim 1, wherein said
8 message distributor unit is operable to route BVCI-based BSSGP
9 packets.

10 12. The network service entity of claim 1, wherein said
11 message distributor unit is operable to build a BVCI-to-IP
12 address/port relationship table using a plug 'n play
13 application.

1 13. A base station system, comprising:

2 a radio base station, said radio base station including at
3 least one of a point-to-point functional unit, a point-to-point
4 termination functional unit, a channel control unit, and a pager
5 agent unit;

6 a radio network server coupled to said radio base station,
7 said radio network server including at least one of a BVC
8 management functional unit, a signalling termination unit, and
9 a pager unit; and

10 a gateway coupled to said radio base station and said radio
11 network server, said gateway including at least one of a message
12 distributor unit coupled to a connection interface and operable
13 to distribute packet information, and a network service
14 management functional unit.

15 14. The base station system of Claim 13, further
16 comprising:

1 a point-to-multipoint functional unit coupled to said
2 message distributor unit, said radio base station, and said
3 radio network server.

4 15. The base station system of Claim 13, wherein said
5 signalling termination functional unit comprises a BSSGP
6 signalling termination functional unit.

7 16. The base station system of Claim 13, wherein said
8 packet information comprises GPRS data.

9 17. The base station system of Claim 13, wherein said
10 packet information comprises EDGE data.

11 18. The base station system of Claim 13, wherein said
12 connection interface comprises a Gb interface.

1 19. The base station system of Claim 13, wherein said
2 point-to-point functional unit includes an RLC/MAC control unit.

3 20. The base station system of Claim 13, wherein said
4 point-to-point functional unit is coupled to a radio air
5 interface by said channel control unit.

6 21. The base station system of Claim 13, wherein said
7 message distributor unit is operable to route BVCI-based BSSGP
8 packets.

9 22. The base station system of Claim 13, wherein said
10 radio base station and said radio network server are coupled via
11 a G21 signalling protocol.

12 23. The base station system of Claim 13, wherein said
13 gateway and said radio network server are coupled via a GateWay-
14 Radio Network Server signalling protocol.

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1 24. A mobile communication system, comprising:
2 at least one radio base station, said at least one radio
3 base station including at least one of a point-to-point
4 functional unit, a point-to-point termination functional unit,
5 a channel control unit, and a pager agent unit;

6 at least one radio network server coupled to said at least
7 one radio base station, said at least one radio network server
8 including at least one of a BVC management functional unit, a
9 signalling termination unit, a network service management unit,
10 and a pager unit; and

11 a serving GPRS support node coupled to said at least one
12 radio base station and said at least one radio network server,
13 said serving GPRS support node including at least a message
14 distributor unit coupled to a connection interface and operable
15 to distribute packet information.

16 25. The mobile communication system of Claim 24, further
17 comprising:

1 a point-to-multipoint functional unit associated with said
2 at least one radio network server.

3 26. The mobile communication system of Claim 24, further
4 comprising:

5 a point-to-multipoint functional unit coupled to said
6 message distributor unit, said at least one radio base station,
7 and said at least one radio network server.

8 27. The mobile communication system of Claim 24, wherein
9 said signalling termination unit comprises a BSSGP signalling
10 termination unit.

11 28. The mobile communication system of Claim 24, wherein
12 said packet information comprises GPRS data.

13 29. The mobile communication system of Claim 24, wherein
14 said packet information comprises EDGE GPRS data.

1 30. The mobile communication system of Claim 24, wherein
2 said connection interface comprises a Gb interface.

3 31. The mobile communication system of Claim 24, wherein
4 said connection interface comprises a Gb over IP interface.

5 32. The mobile communication system of Claim 24, wherein
6 said point-to-point functional unit includes an RLC/MAC control
7 unit.

8 33. The mobile communication system of Claim 24, wherein
9 said point-to-point functional unit is coupled to a radio air
10 interface by said channel control unit.

11 34. The mobile communication system of Claim 24, wherein
12 said at least a message distributor unit is operable to route
13 BVCI-based BSSGP packets.

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A vertical strip of 12 small, square images showing the progression of a plant growing from a seed to a mature plant. The images are arranged in a column, with the seed at the top and the mature plant at the bottom. The images are labeled with numbers 1 through 12, indicating the sequence of growth.

1 36. A radio base station for a base station system,
2 comprising:
3 a point-to-point functional unit;
4 a point-to-point termination functional unit coupled to
5 said point-to-point functional unit;
6 a channel control unit coupled to a radio air interface;
7 and
8 a pager agent unit coupled to said channel control unit and
9 said point-to-point functional unit.

10 37. A radio network server for a base station system,
11 comprising:
12 a management functional unit;
13 a signalling termination functional unit coupled to said
14 management functional unit; and
15 a pager unit coupled to said signalling termination
16 functional unit.

1 38. The radio network server of Claim 37, wherein said
2 management functional unit comprises a BVC management functional
3 unit.

4 39. The radio network server of Claim 37, wherein said
5 signalling termination functional unit comprises a BSSGP
6 signalling termination functional unit.

7 40. A gateway for a base station system, comprising:
8 a message distributor unit coupled to a connection
9 interface and a point-to-multipoint functional unit, said
10 message distributor unit operable to distribute packet
11 information to a plurality of network units; and
12 a network service management functional unit.

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1 41. A method for controlling network service functions in
2 a base station system, comprising the steps of:
3 controlling a connection for conveying data between at
4 least two endpoints in said base station system;
5 controlling a connection for conveying said data between at
6 least a third endpoint and said at least two endpoints in said
7 base station system;
8 controlling at least one connection for conveying
9 signalling information in said base station system; and
10 distributing said data to or from a connection interface.

11 42. The method of Claim 41, wherein the base station
12 system comprises an IP-based base station system.

13 43. The method of Claim 41, wherein said signalling
14 information comprises BVC signalling information.

1 44. The method of Claim 41, wherein said network service
2 functions reside in a PCU.

3 45. The method of Claim 41, wherein said data comprises
4 GPRS packet data.

5 46. The method of Claim 41, wherein said data comprises
6 EDGE GPRS data.

7 47. The method of Claim 41, wherein said connection
8 interface comprises a Gb interface.

9 48. The method of Claim 41, wherein the step of
10 distributing said data to or from a connection interface
11 comprises routing BVC1-based BSSGP packets to or from a Gb
12 interface.